

IN THE ABSTRACT:

Please add the following abstract as follows:

ABSTRACT

An iterative method and a decoder for decoding space-time codes in a communication system with multiple transmission and reception antennae, strikes a compromise between techniques based on interference cancellation algorithms such as BLAST, which show faulty performance concerning error rate based on signal-to-noise ratio and techniques based on maximum likelihood algorithms which are optimal in terms of performance, but highly complex in implantation such as the sphere decoder. Therefor the method includes using a first matrix product between the received signal (Y) and a shaping matrix (B^1), and a second matrix product between a subtraction matrix (D^1) and the vector of the estimated symbols (S^{1-1}) during the preceding iteration. The estimated symbols during the current iteration are generated by a subtractor (9) receiving the results (r^1z^1) of the two matrix products. The role of the matrix D^1 is to subtract from the current information symbol S^1 the interference caused by the other information symbols.